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| EXAMINER |
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HOLLINGTON, JERMELE M

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| ART UNIT | PAPER NUMBER |
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2829

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,849

Applicant(s)

CARLSON-STEVERMER, CRAIG K.

Examiner

Jermele M. Hollington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-14 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-14 and 16-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it is to within the range of 50 to 150 words as stated above. Correction is required. See MPEP § 608.01(b).
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, wafer staging platform comprises at least two platforms [claim 9] and two platforms are aligned in a vertical stack [claim 22] must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

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must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claim 24 is objected to because of the following informalities: in line 2 of the claim, "a sample holder" should be change to --said sample holder-- in order to avoid a duplicant positive recitation of the limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 16-21 and 23-24 rejected under 35 U.S.C. 102(b) as being anticipated by admitted prior art of Figs. 1-13.

Regarding claim 23, admitted prior art of Figs. 1-13 disclose a method for swapping samples (wafers 20 and 22) in a wafer inspection system that includes at least one sample load port (load port 1) and a sample processing platform (processing platform 16) and a robot (robot

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10) to move samples (20 and 22) between the sample load port (1) and the sample processing platform (16) comprising: i) storing a plurality of samples (20 and 22) in the least one sample load port (1); ii) removing [via robot 10] a first sample (20) from the load port (1); iii) processing the first sample (20) on the sample processing platform (16); iv) removing [via robot 10] the first sample 92) from the sample processing platform (16); v) staging [via robot 10] the first sample on a sample holder (load port 2); and vi) returning [via robot 10] the first sample (20) to the sample load port (1).

Regarding claim 16, admitted prior art of Figs. 1-13 disclose moving the first sample (20) from the sample holder (2) to the at least one sample load port (1).

Regarding claim 17, admitted prior art of Figs. 1-13 disclose providing a pre-aligner (pre-aligner 14); and moving a third sample (wafer 20 or 22) from the pre-aligner (14) to the sample holder (2).

Regarding claim 18, admitted prior art of Figs. 1-13 disclose wherein moving [via robot 10] the first sample (20) from the sample holder (2) to the at least one sample load port (1) occurs while a separate sample (22) is being processed on the sample processing platform (16).

Regarding claim 19, admitted prior art of Figs. 1-13 disclose wherein moving [via robot 10] the third sample (wafer 20 or 22) from pre-aligner (14) to the sample holder (2) occurs while a separate sample (22) is being processed on the sample processing platform (16).

Regarding claim 20, admitted prior art of Figs. 1-13 disclose moving [via robot 10] the third sample (20 or 22) from the pre-aligner (14) to a second holder in the sample holder (2).

Regarding claim 21, admitted prior art of Figs. 1-13 disclose wherein moving [via robot 10] the third sample (20 or 22) from the pre-aligner (14) to the second holder in the sample

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holder (2) occurs while the second sample (22) is being processed on the processing platform (16).

Regarding claim 24, admitted prior art of Figs. 1-13 disclose said second sample (20 or 22) in said sample holder (2) prior to processing the second sample 920 or 22) on the sample processing platform (16).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art of Figs. 1-13 in view of Akaike et al (6317647).

Regarding claim 1, admitted prior art of Figs. 1-13 disclose a wafer staging platform [see Note below] comprising: a first platform (load port 1 of item 12) for holding a first wafer (20); a second platform (load port 2 of item 12) aligned with the first platform (load port 1), the second platform (load port 2) for holding a second wafer (wafer 22); wherein the first (load port 1) and second (load port 2) platforms are in close proximity to a processing platform (processing platform 16). However, the admitted prior art does not disclose the platforms are vacuum assisted. Akaike et al disclose [see Fig. 2] a wafer staging platform (aligner 10) comprising a platform (chuck 50) for holding a wafer (W) wherein the platform (50) is vacuum assisted by vacuum exhaust lines 21A and 21B and valves mechanisms 51 and 52. Further, Akaike et al teach that the addition of vacuum exhaust lines and valves mechanisms as vacuum assisted to the

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platform is advantageous because it helps maintain the connection between the platform (chuck) and the wafer under test during testing so that the wafer is unable to move around. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of the admitted prior art by adding vacuum exhaust lines and valves connection to the platform as taught by Akaike et al in order to maintain the connection between the platform (chuck) and the wafer under test during testing.

[Note: The recitation “for a wafer inspection system” has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).]

10. Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art of Figs. 1-13 in view of Sommer (6562184).

Regarding claim 5, admitted prior art of Figs. 1-13 disclose a handling system [see Note below] comprising: a wafer processing platform (16), at least two wafer load ports (load port 1 and load port 2), each wafer load port (1 and 2) configured to receive a wafer transportation cassette (not numbered but shown); and a robot (robot 10) configured to move wafers (wafers 20 and 22) the wafer processing platform (16).

[Note: The recitation “for a wafer inspection system” has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See

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In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).]

However, it does not disclose a wafer staging platform as claimed. Sommer discloses [see Fig. 1] system comprising: a wafer processing platform (factory interface 101), at least two wafer load ports (port 120 and load port 170), each wafer load port (120 and 170) configured to receive a wafer transportation cassette (wafers 126); and a robot (robot 110 and 154) configured to move wafers (wafers 126) between the wafer processing platform (16) and the wafer staging platform (staging platform 130 in staging area 128 and staging platform 156 in staging area 136). Further, Sommer teaches that the addition of staging platform is advantageous because it helps facilitate queuing and transferring of wafers between different areas of the handling system during testing. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of the admitted prior art by adding staging platform as taught by Sommer in order to help facilitate queuing and transferring of wafers between load port and the processing platform during testing.

However, neither admitted prior art nor Sommer disclose the staging platform disposed closer to the processing platform as claimed. It is well known to arrange the elements to make them closer together where needed (see MPEP 2144.04; *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)). It would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the staging platform closer to the processing platform, since it has been held arranging parts of an invention involves only routine skill in the art and it would provide support in a selective manner to each individual user wanting to short time between transfer of the wafer between the two platforms.

Regarding claim 6, admitted prior art of Figs. 1-13 disclose wherein the robot (10) moves the wafers (20 and 22) one of the at least two wafer load ports (1 and 2). However, it does not disclose a wafer staging platform as claimed. Sommer discloses [see Fig. 1] system comprising: a wafer processing platform (factory interface 101), at least two wafer load ports (port 120 and load port 170), each wafer load port (120 and 170) configured to receive a wafer transportation cassette (wafers 126); and a robot (robot 110 and 154) configured to move wafers (wafers 126) between the wafer processing platform (16) and the wafer staging platform (staging platform 130 in staging area 128 and staging platform 156 in staging area 136). Further, Sommer teaches that the addition of staging platform is advantageous because it helps facilitate queuing and transferring of wafers between different areas of the handling system during testing. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of the admitted prior art by adding staging platform as taught by Sommer in order to help facilitate queuing and transferring of wafers between load port and the processing platform during testing.

Regarding claim 7, admitted prior art of Figs. 1-13 disclose the wafer transportation cassette (not numbered) is configured for storing a plurality of wafers (20 and 22).

Regarding claim 8, admitted prior art of Figs. 1-13 disclose a pre-aligner (pre-aligner 14) for aligning wafers (20 and 22) prior to inspection, wherein the robot (10) moves the wafers (20 and 22) to the pre-aligner (14). However, it does not disclose a wafer staging platform as claimed. Sommer discloses [see Fig. 1] system comprising: a wafer processing platform (factory interface 101), at least two wafer load ports (port 120 and load port 170), each wafer load port (120 and 170) configured to receive a wafer transportation cassette (wafers 126); and a robot

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(robot 110 and 154) configured to move wafers (wafers 126) between the wafer processing platform (16) and the wafer staging platform (staging platform 130 in staging area 128 and staging platform 156 in staging area 136). Further, Sommer teaches that the addition of staging platform is advantageous because it helps facilitate queuing and transferring of wafers between different areas of the handling system during testing. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of the admitted prior art by adding staging platform as taught by Sommer in order to help facilitate queuing and transferring of wafers between load port and the processing platform during testing.

Regarding claim 9, Sommer discloses the wafer staging platform (128) comprises at least two platforms (130 and 132), each platforms (130 and 132) for holding a wafer (126).

Regarding claim 10, Sommer discloses the wafer staging platform (128) comprises a vacuum system (216) for holding at least one wafer (126) in place on the wafer staging platform (128).

11. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art of Figs. 1-13 in view of Sommer as applied to claims 5-10 above, and further in view of Smith et al (6503043).

Regarding claim 11, the admitted prior art of Figs. 1-13 in view Sommer disclose a system as stated above. However they do not disclose a sensor as claimed. Smith et al disclose a staging platform (staging platform 182) having a sensor (sensor 192) to determine if a wafer (article 10) is present on the staging platform (182). Further, Smith et al teach that the addition of sensor is advantageous because it detects the presence or absence of a wafer on the platform. It would have been obvious to a person having ordinary skill in the art at the time the invention was

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made to modify the apparatus of admitted prior art in view of Sommer by adding a sensor to the staging platform of Sommer as taught by Smith et al in order to detect the presence or absence of a wafer on the platform.

Regarding claim 12, Smith et al disclose the staging platform (182) comprises the sensor (182).

Regarding claims 13-14 Smith et al disclose the sensor (192) comprises either an optical sensor or vacuum sensor [see col. 6, line 57- col. 7, line 14].

Conclusion

12. Applicant's arguments with respect to claims 1, 5-14 and 16-24 have been considered but are moot in view of the new ground(s) of rejection.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

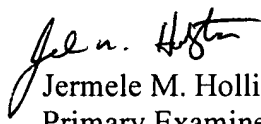
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:30 EST) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (517) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jermele M. Hollington
Primary Examiner
Art Unit 2829

JMH
February 8, 2006